

3/26/91

UTAH WATER POLLUTION CONTROL COMMITTEE

IN THE MATTER OF
TENNECO MINERALS
ST. GEORGE, UTAH

: DOCKET NUMBER 191-03
: NOTICE OF VIOLATIONS
: AND ORDER
:

STATUTORY AUTHORITY

This NOTICE OF VIOLATIONS AND ORDER is issued by the Executive Secretary of the UTAH WATER POLLUTION CONTROL COMMITTEE (hereinafter the COMMITTEE) pursuant to the authority of *Utah Code Annotated 1953, as amended, (hereinafter UCA) 26-11-7 and 26-11-12.*

FINDINGS

1. TENNECO MINERALS (hereinafter TENNECO) operates a heap leaching facility for extraction of gold in the Gold Strike Mining District in the Beaver Dam Mountains, northwest of St. George, Utah.
2. The *Utah Water Pollution Control Act* states that it is unlawful for any person to "place or cause to be placed any wastes in a location where there is probable cause to believe they will cause pollution," UCA 26-11-8(1).
3. In accordance with UCA 26-11-8(2)(a), it is unlawful to "make any discharge not authorized under an existing valid discharge permit." Furthermore, in accordance with *Utah Administrative Code (hereinafter UAC) R448-8-2.1*, "The UPDES program requires permits for the discharge of pollutants from any point source into waters of the State." In accordance with UAC R448-6.-6.1A, "No person may construct, install, modify, or operate any new facility ... which discharges or would probably result in a discharge of pollutants that may move directly or indirectly into ground water ... without an approved ground water discharge permit issued by the Executive Secretary."
4. TENNECO has no UPDES discharge permit, nor a ground water discharge permit other than for heap leach pad number two.

5. The following unpermitted discharges of pollutants have occurred:

- a. Beginning in the afternoon of March 1, 1991, **TENNECO** discharged approximately 550,000 gallons of contaminated water from the process water makeup pond for approximately 36 hours. This discharge contained approximately 20,000 µg/l of cyanide, an unreported amount of sodium hypochlorite and had a pH of 12, according to the report faxed by **TENNECO** to the Bureau on March 4, 1991.
 - b. Beginning in the afternoon of March 4, 1991, until early March 5, 1991, **TENNECO** discharged approximately 250,000 gallons of contaminated water from the process water makeup pond, with a cyanide level of 12,000 µg/l during the first hour and less than 1000 µg/l during the following eleven hours, as reported by telephone by **TENNECO** to the Bureau on March 5, 1991.
 - c. On March 7, 1991, Lyle Stott and Mack Croft of the Bureau of Water Pollution Control inspected the site, accompanied by Ken Kluksdahl of **TENNECO**. They observed that the makeup water pond and the barren pond were leaking, as evidenced by the presence of water in the leak detection sumps.
 - d. Other unauthorized discharges of process fluids containing cyanide took place on February 21, 1990, March 9, 1990, and October 16, 1990, as reported by **TENNECO** to the **COMMITTEE**. Approximately 8,000 gallons of solution was released on February 21, 1990, and 300 gallons on March 9, 1990, resulting from failure of a 6 inch solution distribution pipe on heap leach Pad No. 1. An unknown amount of solution was released on October 16, 1990, resulting from leaks through the exposed section of the liner on heap leach pad number one.
6. In accordance with *UCA 26-11-8-2(b)*, it is unlawful without first securing a permit from the Executive Secretary, to operate any treatment works "the operation of which would probably result in a discharge."
7. The liners of two of the process ponds were damaged on March 6, 1991, according to Ken Kluksdahl, and observed to be leaking by Lyle Stott and Mack Croft of the Bureau of Water Pollution Control, on March 7, 1991. The facility was still in operation and has continued in operation since that time.
8. In accordance with *UAC R448-1-2.2* a construction permit must be obtained from the **COMMITTEE** prior to the construction or modification of any device for the treatment or discharge of wastewater.

9. TENNECO has received construction permits for two heap leach pads and process ponds from the COMMITTEE, for heap leach pad number one and process ponds on November 3, 1988, and for pad number two on March 1, 1990. The construction permit of November 3, 1988, requires that "Adequate diversion improvements shall divert surface water run off around the process ponds," and "The heap leach pad shall be surrounded by drainage ditches to intercept and direct surface run off water around the project and into down gradient drainage."
10. TENNECO had breached the storm water diversion ditch at several locations, as observed by Lyle Stott and Mack Croft of the Bureau of Water Pollution Control on March 7, 1991. As a result, runoff was diverted onto the haul road between the two heap leach pads. On February 28, 1991, at the beginning of a storm event, runoff was diverted onto pad number one and hence into the process ponds by damming the haul road north of the pads, as reported by Ken Kluksdahl of TENNECO to Lyle Stott and Mack Croft on March 7, 1991.
11. In accordance with *UAC R448-2-7.1*, it is unlawful to cause any of the water quality standards of the State to be violated. Beaver Dam Wash and tributaries are classified 3A as per *UAC R448-2*. As per *UAC R448-2-14.2*, the water quality criteria for 3A aquatic wildlife protection is classified as 22 µg/l free cyanide for a one hour average and 5.2 µg/l for a four day average.
12. In accordance with *UAC R448-1-2.7*, the facility must be operated in a manner consistent with the protection of public health.
13. Although the discharges from the ponds were directed into the sedimentation pond, this pond was designed only to retain the solids in storm water runoff, and the water seeped through the earthen embankment rapidly enough to become a visible surface flow on the down gradient side (in addition to the likely ground water flow). At the point where it entered the East Fork, a tributary of Beaver Dam Wash, the cyanide level was 220 µg/l on March 1, 1991, and 169 µg/l on March 6, 1991, according to State monitoring data. Average concentrations of cyanide in fluids released to the sedimentation pond was 1,200 µg/l as reported by TENNECO exceeds the USEPA Drinking Water Health advisory for total cyanide of 200 µg/l.
14. In accordance with *UAC R448-1-2.1*, it is unlawful to discharge wastewater in violation of State Water Pollution Control Regulations.

VIOLATIONS

TENNECO is in VIOLATION of

1. UAC 26-11-8(1), for placing wastes in a location where there is probable cause to believe pollution will result, pursuant to **FINDINGS** 2, 5, 6 and 13.
2. UCA 26-11-8(2)(a), for unpermitted discharges to both surface and ground water, pursuant to **FINDINGS** 3, 4 and 5.
3. UCA 26-11-8-2(b), for operation of a facility which is probably resulting in a discharge, pursuant to **FINDINGS** 6, 7 and 10.
4. Construction Permit dated November 3, 1988, and thus UCA 26-11-6(8), for failure to maintain adequate runoff diversion, pursuant to **FINDINGS** 8 through 10.
5. UAC R448-2-7.1, for violation of State water quality standards, pursuant to **FINDINGS** 11 and 13.
6. UAC R448-1-2.1, for failure to comply with State water pollution regulations, pursuant to **FINDINGS** 3, 5 and 8 through 14.
7. UAC R448-1-2.7, for operation of a facility not consistent with adequate protection of public health, pursuant to **FINDINGS** 5, 7 and 10 through 13.

ORDER

TENNECO is hereby ordered to:

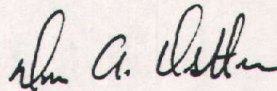
1. Immediately comply with the foregoing and with any other applicable water pollution control laws and regulations.
2. Submit a report to the Executive Secretary within fifteen (15) days of receipt of this **ORDER** that defines in detail the actions taken and/ or planned to be taken, including a schedule, in order to comply with this **ORDER**.
3. Submit within thirty (30) days a detailed implementation plan and schedule, including necessary engineering, hydrologic and geotechnical evaluation, for restoration, remedy and upgrade of the process ponds and storm water conveyance structures and appurtenances.

4. Submit plans for Executive Secretary approval to conduct a ground water study to define the vertical and horizontal extent of contamination needed to assess corrective actions for ground water cleanup.
5. Minimize any adverse impact to the environment. Forthwith, cyanide must not be added to the process fluids without approval from the Executive Secretary.
6. Show cause within five (5) days as to why the process ponds should not be neutralized, to minimize potential contamination of the ground water.

You are advised that failure to comply with this **ORDER** violates the *Utah Water Pollution Control Act*. Any violation of the *Act* including those mentioned herein, may subject you to up to \$10,000 per day penalty per violation and up to \$25,000 per day penalty per violation for willful violations. As provided in *UCA 26-11-12* you have the right to appeal this **NOTICE** and **ORDER** by submitting a written application for a hearing before the **COMMITTEE** within thirty (30) days of receipt of this **NOTICE** and **ORDER**.

Dated this 26th day of March, 1991.

Utah Water Pollution Control Committee



Don A. Ostler, P.E.
Executive Secretary